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July 5, 2018

VIA ECFS

Marlene Dortch, Secretary Federal Communications Commission 445 12th Street, SW Washington, DC 20554

Re: Raytheon Company: Written *Ex Parte* Presentation; Expanding Flexible Use of the 3.7 GHz to 4.2 GHz Band;

GN Docket No. 18-122

Dear Ms. Dortch:

Raytheon Company ("Raytheon Company"), by its undersigned attorney, herein supports several requests made by the NCTA – The Internet & Television Association ("NCTA") in NCTA's July 2, 2018, *ex parte* notice filed in the above-referenced matter. In the *NCTA* ex parte *Letter*, NCTA and its members ask the Commission to defer adoption of any Order that would require earth station operators in the 3.7-4.2 GHz band (the "4 GHz band") to provide additional information about their operations until the Commission receives comment on the utility of any additional information the Commission might seek. NCTA also suggests changes to the Commission's *Draft NPRM and Order* in this docket that it will be voting on at the July

See Letter from Danielle J. Piñeres, Vice President and Associate General Counsel, NCTA, to Marlene H. Dortch, Secretary, FCC (filed July 2, 2018) ("NCTA Ex Parte Letter").

Id. at 1-3. SES and Intelsat take a similar position. See Letter from Michele Farquhar, Hogan Lovells US LLP, to Marlene H. Dortch, Secretary, FCC (filed July 3, 2018) ("Before placing an extraordinary burden on C-band receive-only earth station operators [through the information collection requirement set out in the *Draft NPRM and Order*], especially small and rural operators, the Commission should weigh the costs and benefits of doing so and seek comment.")

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Open Meeting,³ asking the Commission to seek "comment on its full-band, full-arc licensing policy, rather than proposing to end it."⁴

As the Commission looks to vote on adoption of a Notice of Proposed Rulemaking launching a proceeding that would consider introducing additional types of services and applications into at least some parts of the 4 GHz Band, it wisely has recognized the need to have a more accurate understanding of the scope and volume of existing deployment of receive-only Fixed Satellite Service ("FSS") earth stations and the critical various services they enable. Specifically, although implementing a freeze on April 19, 2018, of *new earth station* applications and registrations in the 4 GHz Band, the International, Public Safety and Homeland Security, and Wireless Telecommunications Bureaus (collectively, the "Bureaus") opened a filing during which operators of existing, but unregistered, receive-only earth stations may register the stations.⁵ The Bureaus noted in the *April 19 Public Notice* that the Commission may decide to consider the impacts on only those earth stations that are licensed or registered as of the close of this window – recently extended through October 17, 2018 – when balancing possible options for expanded use of the 4 GHz Band.⁶ In the *Draft NPRM and Order*, the Commission reiterated the necessity of developing information about earth station usage in the 4 GHz Band.⁷ Raytheon

³ See Expanding Flexible Use of the 3.7 to 4.2 GHz Band, et al., Public Draft of Notice of Proposed Rulemaking and Order, GN Docket No. 18-122, et al., ¶ 18 (rel. June 21, 2018) ("Draft NPRM and Order")

⁴ *NCTA* Ex Parte *Letter* at 3-4.

See Temporary Freeze on Applications for New or Modified Fixed Satellite Service Earth Stations and Fixed Microwave Stations in the 3.7-4.2 GHz Band; 90-Day Window to File Applications for Earth Stations Currently Operating in the 3.7-4.2 GHz Band, Public Notice, GN Docket Nos 17-183 and 18-122, DA 18-398 (IB, PSHSB, WTB rel. April 19, 2018) ("April 19 Public Notice") (opening a 90-day filing window through July 18, 2018); International Bureau Announces 90-Day Extension of Filing Window, to October 17, 2018, to File Applications for Earth Stations Currently Operating in 3.7-4.2 GHz Band; Filing Options for Operators with Multiple Earth Station Antennas, Public Notice, GN Docket Nos 17-183 and 18-122, DA 18-639 (IB rel. June 21, 2018) ("June 21 Public Notice"). Additionally, these Public Notices permit operators of existing unlicensed transmit/receive earth stations in the band to file license applications within the same window.

⁶ *Id.* at 5.

See Draft NPRM and Order, ¶ 18 ("[T]o evaluate the potential for a flexible use allocation in the 3.7-4.2 GHz band and determine how much spectrum could be made available, we must evaluate the existing earth station usage of C-band satellites—including location and technical data that may be necessary to mitigate harmful interference. This information will assist in determining whether earth stations will need to be protected as well as how they may need to be protected depending on how the Com-mission moves forward with increasing the

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applauds reasonable efforts by the Commission to develop a complete picture of earth station deployment and usage in the band.

As explained in recent reply comments filed by Raytheon in the above-referenced docket, the company is working with its federal government customers to ensure that the more than one hundred 4 GHz Band receive-only earth stations that Raytheon supports for their benefit and mission critical operations are registered by the Commission's deadline. Collecting the information needed to register these stations is itself a significant task, and it is unclear whether the additional information collection requirement the *Draft NPRM and Order* would implement would yield further useful information. Accordingly, Raytheon seconds NCTA's request that the Commission seek comment in the NPRM it adopts on whether and what additional information should be collected before issuing any type of order imposing such a requirement. Proceeding in this way will better ensure that the burden associated with such a requirement will provide the most useful information the Commission does not already have to aid it in its decisions.

Further, Raytheon supports NCTA's request that the Commission modify the *Draft NPRM and Order* to expressly seek comment on the benefits and continuing need for the full-band, full-arc policy. From the vantage point of its extensive experience in supporting earth stations of federal government customers, Raytheon wishes to underscore certain practical realities of C-Band earth station operation. The Commission should take the following realities into account as it considers the future uses of the 4 GHz Band and the protections that will be made available to incumbent earth station operators. To do so, the Commission should more clearly develop a full record on these matters by modifying the *Draft NPRM and Order* in the manner that NCTA seeks, as described above. ¹⁰

Raytheon wishes to underscore that earth station configurations in the band are not static in at least two ways. First, installed earth stations, without changing location, may have to

intensity of terrestrial use of the band. It will also allow the Commission to evaluate the feasibility of the various transition proposals.")

See Reply Comments of Raytheon Company, GN Docket No. 18-122, at 5-6 (June 15, 2018). The deadline was extended to October 17 after the filing of these reply comments.

Moreover, NCTA persuasively argues that the sort of information collection requirement contained un the *Draft NPRM and Order*, where the data is being gathered to support the Commission rulemaking decisions and where the failure to respond to the information collection in a timely manner may result in loss or curtailment of earth station operators' rights, can only be implemented after notice and an opportunity for comment so as to comply with Administrative Procedures Act requirements. *NCTA* Ex Parte *Letter* at 2.

Raytheon takes no position at this time on those parts of the *NCTA* ex parte *Letter* not addressed herein.

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reorient to new satellites in the orbital arc or may have to tune to new frequencies in the band. Such changes in pointing direction or frequency will change the profile for potential interference into the earth station from other proximate radio station operators operating in adjacent or cochannel spectrum. Reorientation may occur because a transponder lease or service contract expires. This may also be necessary as a result of satellite failure or degradation of performance, which may entitle the earth station operator to adjust by reorienting and/or moving to a new frequency. Other causes may have the same effect. Registered or licensed earth stations in the 4 GHz Band that need to reorient, often for reasons outside their control, should not lose any interference protection to which they are entitled.

Second, as with the reorientation or retuning of earth stations, the need for operators to change the location of 4 GHz receive-only earth stations is not uncommon in the regular course of operations. This can happen for several reasons. For instance, property leases underlying the earth station deployment may expire or, alternatively, be terminated prior to expiration due to a variety of causes, many unrelated to any fault by the earth station operator. Alternately, there may be environmental or other impacts that develop after an earth station is installed that force an earth station operator to move its location. Or an earth station may have to repoint to a new satellite, but the existing site is not suitable for such reorientation due to obstructions, frequency management issues, or for other reasons. It is also possible that an earth station operator might consider moving to accommodate another operator of a different service that wishes to deploy in its vicinity.

Because earth stations often have to reorient, change frequency, or relocate as part of normal operations, if the Commission intends to afford earth station operators adequate protection, the Commission should, as NCTA urges, modify the *Draft NPRM and Order* specifically to seek comment on the role the full;-band, full-arc policy plays in conferring required flexibility on the part of earth station operators and satellite customers, not only in the media and entertainment industry but also other industries and sectors. In addition, the Commission should also seek comment on the related issues of the flexibility required by earth station operators to relocate their station locations to ensure continuity of service. Armed with such information submitted in response to an NPRM designed to solicit it, the Commission can better fashion a protection framework that takes into account the practical realities of earth station operation.

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Pursuant to Section 1.1206(b) of the Commission's rules, this letter is being filed electronically.

Respectfully submitted,

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